

EMBEDDED COMPUTING PLATFORMS



- HW / SW - platforms and OS from one source
- Software services for sustainable development
- UX evaluations kits for an immediate start
- OS support from internal platform team
- Platform life cycle management
- Supports HMI, IOT and AI applications

U-EXPERTEN A TRUE ONE-STOP SHOP

A true one-stop shop: U-Experten are leading specialists for the realization, industrialization, and production of embedded solutions and smart connected devices.

For the consumer and capital goods sectors, our interdisciplinary teams of consulting, UX design, engineering, and production are designing, developing, and manufacturing connected products and product lines with perfect user experience.

INDIVIDUAL EMBEDDED SOLUTION MATCHING YOUR REQUIREMENTS

Our U-Experten computing platforms meet all necessary requirements in different performance classes in terms of scalability, performance, long-term availability, and robustness. This always guarantees high flexibility, low risk, and a short time-to-market.

To differentiate your products, we offer high-performance, fanless computing platforms complete with board support packages.

Create impact with innovative solutions based on IOT connectivity, Agentic AI and thoughtful HMI user interfaces providing outstanding user experience.

OUR SOLUTIONS SUCCESSFUL IN MANY INDUSTRIES

- Food & Beverage
- Coffee systems
- Laboratory
- Light & Building
- Industrial
- Consumer products
- Medical
- Retail
- and many more!



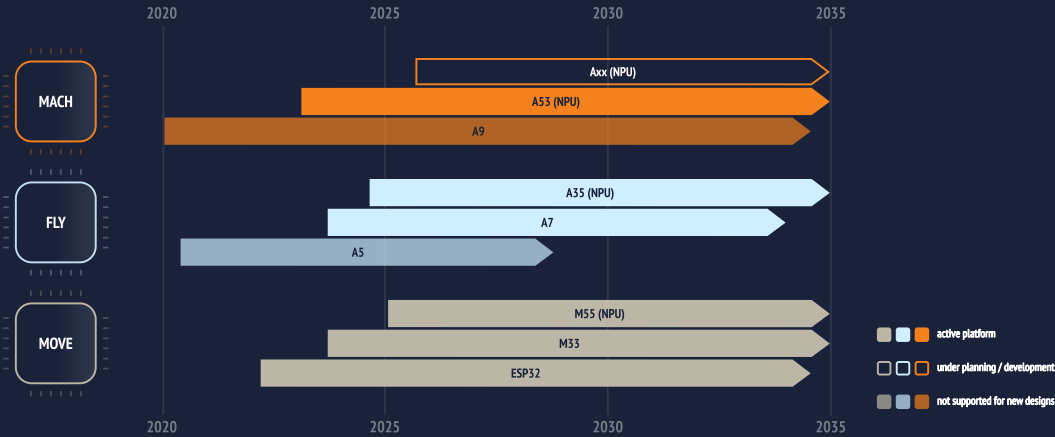
YOUR CONTACT RALF NEBEL, PRODUCT MANAGER

info@u-experten.de
+49 8105 77839-0

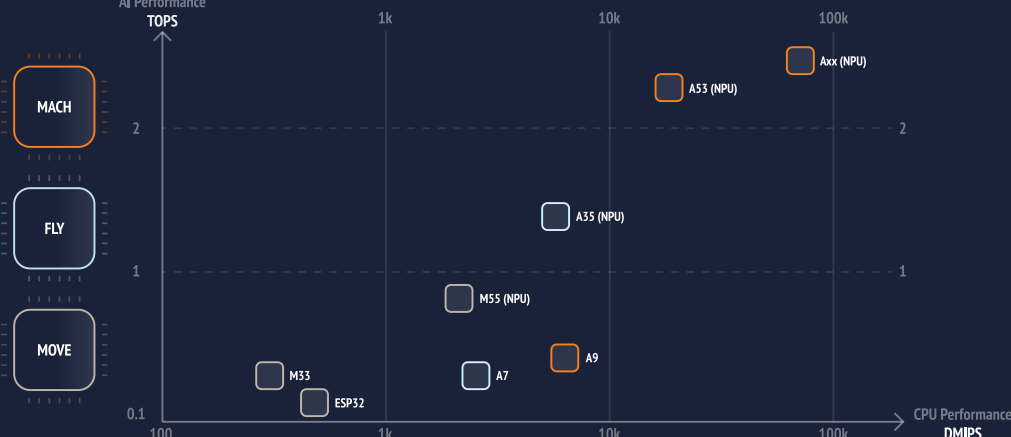
EMBEDDED COMPUTING PLATFORMS

	MOVE ESP32	MOVE M33	MOVE M55	FLY A7	FLY A35	MACH A9	MACH A53
Platform Hardware							
CPU	LX6 based ESP32 series	STM32U5xx	STM32N6x7 series	STM32MP15x series	STM32MP25x series	i.MX6 series	i.MX8Mplus series
Core	Xtensa® 32-bit LX6 / LX7	Cortex®-M33 STM32®	Cortex®-M55 STM32®	multi-core Cortex®-A7	multi-core Cortex®-A35	multi-core Cortex®-A9	multi-core Cortex®-A53
Speed	up to 240 MHz	up to 160 MHz	up to 800 MHz	up to 800 MHz	up to 1.500 MHz	up to 1.000 MHz	up to 1.800 MHz
Graphic acceleration	–	NeoChromVG™	NeoChrom™ & Chrom-ART	3D openGL ES2.0	3D openGL ES3.1 / CL3.0	3D openGL ES3.0	3D open GL ES3.1 / CL1.2
Video unit	–	MJPEG	H.264 FHD encoder / JPEG	–	H264/VP8 FHD / JPEG	FHD video	H265/4 VP8 VP9 FHD
Neuronal unit	–	–	0.6 TOPS	–	1.35 TOPS	–	2.3 TOPS
Co-processor	–	–	–	M4 up to 209 MHz	M33 up to 400 MHz	–	M7 up to 800 MHz
Memory							
RAM	SDRAM	Internal / SDRAM		LPDDR3	LPDDR4	LPDDR3	LPDDR4
Storage	SPI NOR / eMMC / µSD	Internal / SPI / NAND / eMMC / µSD	SPI NOR / NAND / eMMC / µSD	eMMC / µSD		eMMC / µSD	
Interfaces							
Ethernet	10/100 Mbit			10/100/1.000 Mbit	10/100/1.000 Mbit x3	10/100/1.000 Mbit	10/100/1.000 Mbit x2
USB	2.0			2.0	2.0 / 3.0	2.0	3.0
Serial	UART, I2C, SPI, CAN			UART, I2C, SPI, CAN	UART, I2C, SPI, CAN, AC97, I2S	UART, I2C, SPI, CAN, AC97, I2S	
Audio	yes	–	yes	yes	AC97/I2S	AC97/I2S	HIFI
Camera MIPI CSI	1x	–	–	1x	2x	1x	2x
Extra	BT, WLAN	Analog, BT, WLAN		BT, WLAN	PCIe G2, BT, WLAN	PCIe G1, SATA, BT, WLAN	PCIe G3, SATA, BT, WLAN
Platform Software							
OS	FreeRTOS			Linux 6.6LTS & FreeRTOS		Linux 6.6LTS	Linux 6.6LTS & FreeRTOS
Bootloader	UXG			uboot 2024.01		uboot 2024.01	
Environment	UXG C++ framework			buildroot 2025.02 / Yocto		buildroot 2025.02 / Yocto	
HMI framework	LVGL/ µGFX	TouchGFX		Qt/QML	Qt/QML/Flutter	Qt/QML	Qt/QML/Flutter
Support Solution	HMI / IOT	HMI / IOT	HMI / IOT / AI	HMI / IOT	HMI / IOT / AI	HMI / IOT	HMI / IOT / AI
Display Resolution	up to QVWGA	up to WVGA	up to WSVGA	up to WXGA	up to FHD	up to FHD	up to 4k
Touchl Screen	PCAP			multitouch PCAP		multitouch PCAP	
Development Kits							
UX Evaluation Kit	–	–	–	including HMI Touchfront		including HMI front	
UX AI Vision Kit	–	–	–				U-Agent

ROADMAP



PERFORMANCE



YOUR CONTACT
RALF NEBEL, PRODUCT MANAGER
info@u-experten.de
+49 8105 77839-0